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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER	
HOLLERAN, ANNE L	

ART UNIT	PAPER NUMBER
1642	10

DATE MAILED: 10/03/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Applicati n No. 09/931,733	Applicant(s) CERTA, ULRICH	
	Examiner Anne Holleran	Art Unit 1642	

-- The MAILING DATE of this communication appears n the cover sheet with the correspondenc address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on _____ .

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) 1-21 is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) 1-7,11-13 and 15-21 is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11)☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12)☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____ .

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

a) ☐ The translation of the foreign language provisional application has been received.

15)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 6,9 .
4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: .

DETAILED ACTION

1. The preliminary amendment filed January 8, 2002 is acknowledged.

Election/Restrictions

2. Restriction to one of the following inventions is required under 35 U.S.C. 121:

I. Claims 1-7, 11-13 and 15-21, drawn to methods of diagnosis comprising measuring the expression level of genes using techniques for measuring nucleic acids, classified in class 435, subclass 6.

II. Claims 1-6, 8, 11-13 and 15-21, drawn to methods of diagnosis comprising measuring the expression levels of genes using techniques for measuring proteins, classified in class 435, subclass 7.1.

III. Claims 9 and 10, drawn to kits comprising nucleic acids, classified in class 536, subclass 23.5.

IV. Claims 9 and 14, drawn to kits comprising antibodies, classified in class 530, subclass 387.1.

3. Claims 1-6, 11-13 and 15-21 link inventions I and II. Claim 9 links inventions III and IV. The restriction requirement between the linked inventions is subject to the nonallowance of the linking claims, claims 1-6, 11-13 and 15-21 (in the case of groups I and II) or 9 (in the case of groups III and IV). Upon the allowance of the linking claims, the restriction requirement as to the linked inventions shall be withdrawn and any claims depending from or otherwise including all the limitations of the allowable linking claims will be entitled to examination in the instant application. Applicant is advised that if any

such claims depending from or including all the limitations of the allowable linking claims are presented in a continuation or divisional application, the claims of the continuation or divisional application may be subject to provisional statutory and/or nonstatutory double patenting rejections over the claims in the instant application. Where a restriction requirement is withdrawn, the provisions of 35 U.S.C. 121 are no longer applicable. *In re Ziegler*, 44 F.2d 1211, 1215, 170 USPQ 129, 131-32 (CCPA 1971). See also MPEP § 804.01.

4. The inventions are distinct, each from the other, for the following reasons:

The methods of Inventions I and II differ in method steps and parameters measured and in the reagents used. Invention I is drawn to a methods for detecting nucleic acid expression and Invention II is drawn to methods for detecting protein expression. Thus, each of the inventions uses different reagents and employs separate and distinct methods for detection. Furthermore, Inventions I and II are separately classified, necessitating separate searches. Thus, Inventions I-II are patentably distinct.

The products of inventions III and IV are separate and distinct products. The products of invention III are nucleic acids, which belong to a distinct class of compounds that are separate and distinct from the antibody products of invention IV. They share no structural features in common. Furthermore, they are separately classified, necessitating separate searches. Thus, Inventions III and IV are patentably distinct.

Inventions I and III are related as product and process of use. The inventions can be shown to be distinct if either or both of the following can be shown: (1) the process for using the product as claimed can be practiced with another materially different product or

(2) the product as claimed can be used in a materially different process of using that product (MPEP § 806.05(h)). In the instant case, the inventions of group III may be used in the materially different process of making a polypeptide.

Inventions II and IV are related as product and process of use. The inventions can be shown to be distinct if either or both of the following can be shown: (1) the process for using the product as claimed can be practiced with another materially different product or (2) the product as claimed can be used in a materially different process of using that product (MPEP § 806.05(h)). In the instant case, the antibody of invention IV may be used in a materially different process of isolating and purifying an antigen.

5. Because these inventions are distinct for the reasons given above and have acquired a separate status in the art because of their recognized divergent subject matter, restriction for examination purposes as indicated is proper.

6. This application contains claims directed to the following patentably distinct species of the claimed invention: the species of claim 21: S75415, M32053, X16665 and D00597.

Applicant is required under 35 U.S.C. 121 to elect a single disclosed species for prosecution on the merits to which the claims shall be restricted if no generic claim is finally held to be allowable. Currently, claims 15-21 are generic.

Applicant is advised that a reply to this requirement must include an identification of the species that is elected consonant with this requirement, and a listing of all claims readable thereon, including any claims subsequently added. An argument that a claim is

allowable or that all claims are generic is considered nonresponsive unless accompanied by an election.

Upon the allowance of a generic claim, applicant will be entitled to consideration of claims to additional species which are written in dependent form or otherwise include all the limitations of an allowed generic claim as provided by 37 CFR 1.141. If claims are added after the election, applicant must indicate which are readable upon the elected species. MPEP § 809.02(a).

Should applicant traverse on the ground that the species are not patentably distinct, applicant should submit evidence or identify such evidence now of record showing the species to be obvious variants or clearly admit on the record that this is the case. In either instance, if the examiner finds one of the inventions unpatentable over the prior art, the evidence or admission may be used in a rejection under 35 U.S.C. 103(a) of the other invention.

7. During a telephone conversation with Ms. Rocha on 9/15/2003 a provisional election was made with traverse to prosecute the invention of group I, and species of S75415, claims 1-6, 7, 11-13, and 15-21. Affirmation of this election must be made by applicant in replying to this Office action. Claims 8-10 and 14 are withdrawn from further consideration by the examiner, 37 CFR 1.142(b), as being drawn to a non-elected invention.

8. Claims 1-21 are pending.

Claims 8-10 and 14, drawn to non-elected inventions, are withdrawn from consideration.

Claims 1-7, 11-13 and 15-21 (to the extent that the claims read on methods of detection of nucleic acids) are examined on the merits.

Claim Rejections - 35 USC § 112

9. Claims 1-7, 11-13 and 15-21 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 1 is indefinite because the phrase "the genes predictive for said treatment" lacks antecedent basis.

Claim 11 is indefinite because it recites a claim to a method without a definition of how identification of a gene expression profile allows one to determine if cells or tissues will be sensitive or resistant to a tumor treatment.

Claim 15 is indefinite because it is claim that is drawn to methods for determining the presence of absence of expression of "a gene", but is the parent claim of claim 21, which is drawn to a method "where the gene is at least one gene selected from the group…".

Claim 21 is indefinite for reciting terms that appear to be the names or designations of genes, without a definition of the structures that correspond to the names or designations.

10. Claims 1-7 and 15-21 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter, which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art, that the inventor(s) at the time the application was filed, had possession of the claimed invention. The basis of this rejection is that for claims 1-6, the specification lacks adequate description of the genus of "genes predictive for" a treatment; in the case of claims 4-6 and 7, the specification lacks an adequate description of the genus of "genes predictive for IFN-α treatment"; and in the case of claims 15-21, the specification lacks an adequate description of the genus of "genes predictive for IFN-α" treatment" and also lacks an adequate description of the genes designated as "S75415, M32053, X16665 and D00597".

The specification fails to describe the structure, or partial structure, or any of the possible genes that might belong to the genus of "genes predictive for" a cancer treatment or "predictive" for IFN-α treatment. Thus, the specification lacks a description of the structures of the nucleic acid probes that are required for the operation of the claimed methods. A disclosure that does not adequately describe a product, in this case the probes used for the measurement of gene expression levels, logically cannot adequately describe a method of using that product. While the specification provides laboratory designations of genes, it fails to describe these genes structurally, nor does the specification provide any partial structures of such genes, nor any physical or chemical characteristics of the genes, nor any functional characteristics coupled with a known or disclosed correlation between structure and function. Furthermore, the specification fails to describe a representative number of species of the genus of genes predictive for a

cancer treatment, or predictive of IFN-α treatment, nor does is describe structural features common to the members of the genus. Since the specification fails to adequately describe the product, it also fails to adequately describe the claimed methods of using the product.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

11. Claims 1, 2, 4-7, 11-13, 15, 17, 19-21 are rejected under 35 U.S.C. 102(e) as being anticipated by Silverman (U.S. Patent 6,331,396; issued Dec. 18, 2001; effective filing date Sep. 23, 1998).

Silverman teaches methods for establishing patient sensitivity to IFN-α (see col. 3, lines 8-22; col. 7, lines 20-41), where the methods comprise measuring the mRNA expression level of genes (see col. 3, line 65- col. 5, line 30). Thus, Silverman teaches methods that are the same as that claimed.

12. Claims 1, 2, 6, 7, and 11 are rejected under 35 U.S.C. 102(b) as being anticipated by Johnston (Johnston, P.G. et al., Cancer Res., 55: 1407-1412, 1995; cited in the IDS).

Johnston teaches a method for assessing patient responsiveness to 5-fluorouracil in human colorectal or gastric cancer patients, comprising measuring mRNA levels expressed by the thymidylate synthase gene (see page 1410, 2nd col. to 1411, 1st col.). Thus, Johnston teaches methods that are the same as that claimed.

13. Claims 1, 2, 4-7, and 11-13, 15, 17, 19 and 20 are rejected under 35 U.S.C. 102(a) as being anticipated by Celis (Celis, J.E. et al., FEBS Letters., 480: 2-16, 2000; 25 August; cited in the IDS).

Celis teaches gene expression profiling using either cell lines or tissue biopsies for the purpose of predicting treatment outcome (see page 6, 1st col), comprising the use of DNA microarrays (see page 3, col. 1-2), and teaches that arrays have been used for the study of the effects of interferons on gene expression. Thus, Celis teaches methods that are the same as that claimed.

14. Claims 1-3, 6, 7, and 11-13 are rejected under 35 U.S.C. 102(b) as being anticipated by Scherf (Scherf, U. et al., Nature Genetics, 24: 236-244, 2000; March; cited in the IDS).

Scherf teaches detecting sensitivity to therapy in melanoma cell lines (see page 241, 2nd col. and Figure 2, legend). Thus, Scherf teaches methods that are the same as that claimed.

15. Claims 11-13 are rejected under 35 U.S.C. 102(b) as being anticipated by Der (Der, S. D. et al., Proc. Natl. Acad. Sci, USA, 95: 15623-15628, 1998; cited in the IDS).

Claims 1-13 are drawn to methods comprising the identification of gene expression profiles in cell lines or tumor cell lines. Der teaches the identification of gene expression profiles in HT1080 cell lines, comprising the use of oligonucleotide probes. Thus, Der teaches methods that are the same as that claimed.

Conclusion

No claim is allowed.

Any inquiry concerning this communication or earlier communications from the Office should be directed to Anne Holleran, Ph.D. whose telephone number is (703) 308-8892. Examiner Holleran can normally be reached Monday through Friday, 9:30 am to 2:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Anthony Caputa, Ph.D. can be reached at (703) 308-3995.

Any inquiry of a general nature or relating to the status of this application should be directed to the Group receptionist at telephone number (703) 308-0196.

Anne L. Holleran
Patent Examiner
October 1, 2003

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